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The effects of dolomitization on petrophysical properties and fracture distribution within rift-related carbonates (Hammam Faraun Fault Block, Suez Rift, Egypt)

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ABSTRACT

Petrographic and petrophysical data from different limestone lithofacies (skeletal packstones, matrix-supported conglomerates and foraminiferal grainstones) and their dolomitized equivalents within a slope carbonate succession (Eocene Thebes Formation) of Hammam Faraun Fault Block (Suez Rift, Egypt) have been analyzed in order to link fracture distribution with mechanical and textural properties of these rocks. Two phases of dolomitization resulted in facies-selective stratabound dolostones extending up to two and a half kilometers from the Hammam Faraun Fault, and massive